TELECITY DEVELOPMENT STRATEGY
FOR SUSTAINABLE, LIVABLE COMMUNITIES
THE BLUE LINE TELEVILLAGE IN COMPTON, CALIFORNIA

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Introduction to TeleCity

Central to the concept of livable communities is the idea of proximity between residence and the essential elements of daily life, such as work places, schools, civic facilities, shopping opportunities and parks. This human scale organization of urban living means that the personal automobile and its related facilities—wide streets and parking lots—are not required and can be replaced by walking, public transit and more human scale technologies, including bicycles and golf carts.

Towns and neighborhoods considered "livable" will have centers that reflect the unique characteristics and needs of each residential community. Each center will have a functional relationship with its immediately adjacent communities.

These ideas of urban life are reminiscent of cities as they were often built in the past— before post-war suburban development fixed the need for an automobile into the land use pattern by creating large scale concentrations of single function buildings, such as housing tracts, shopping centers and office parks.

But while the principles of livability can guide land use patterns in new development, auto orientation remains in the existing built environment. The simple fact is that new development, no matter how perfectly designed, contributes only a minuscule change to the built environment. It is unlikely that significant progress can be made toward reducing automobile dependence if change is based on new construction alone—through in—fill, redevelopment, and new towns.

Fortunately, new information technologies—characterized by unprecedented improvements in price-performance ratios—are available for application to urban redesign. Furthermore, the models of

livable communities proposed to date do not meaningfully incorporate the powerful capabilities of these new technologies.

It is possible for land use patterns to reflect the capabilities of information technologies comparable to what has occurred around the capabilities of the automobile. And it is possible and affordable to do this as a *retrofit* of the existing built environment. In this way, even an automobile suburb can be made to function as if it was a traditional village. In other words, the auto dependent functional characteristics of the existing built environment can be changed.

The TeleCity Development Strategy is how this can be accomplished.

Vision of TeleCity

TeleCity refers to the city-of-the-future where information technologies are used for mobility, economic growth and other long term public interests, as well as the short term private interests usually satisfied by competitive markets.

TeleCity physically looks a lot like the metropolitan area that is currently home to most people—but it functions much differently. For example:

- Trips outside of the home are much shorter, usually no more than a few miles.
- Economic opportunities are distributed more equally throughout the region, not concentrated in employment and retail centers.
- Most communities include a mixture of moonlighters, free lance workers, self-employed, small businesses owners and employees, and corporate employees—many of whom telecommute.
- Some households own only one automobile.
- Public transit is different, more local, smart, less route specific, affordable — and heavily used.
- Groups of neighborhoods form an Urban TeleVillage which has a center that functions as a point of entry to electronic markets and public transactions, and offers rich opportunities for face-to-face interactions for TeleVillage members.
- Centers actually serve and are used by the people that live in proximity to them.
- Urban TeleVillages encourage self-sustaining neighborhoods in that they enable residents to "co-produce" many government services.
- Some parking lots have been converted to affordable housing or community gardens.
- Ground transportation in neighborhoods moves slowly and the vehicles consist of a mix of people-powered-vehicles, electric carts, public transit systems, and traditional automobiles.
- Everyone has access (from on-demand to first-come, first-served) to the full range of information technologies at a location no further than the TeleVillage Center.
- Some homes have state-of-the-art home offices and home entertainment complexes, but most homes have a mix of technologies that are old and new, simple and full featured, poor and powerful.

All of this can be accomplished with very little new physical construction and no dramatic changes in living density. There are no technical or economic barriers so that, with political will,

it is achievable in most places within 20 years. It requires only comparatively modest capital investments in infrastructure so that it is an affordable strategy. Finally, the TeleCity Strategy can ensure the environmental integrity of new development, AND, because it is a retrofit strategy, it can improve existing cities regardless of their current density.

The TeleCity Strategy depends on a coordinated public-private effort to bring about mutually reinforcing changes in five key regional systems.

TeleCity Strategy

Public and private sectors must work together to develop:

1) A hierarchical network of advanced communication centers which forms the physical infrastructure for residents to shop, work, take classes, enjoy entertainment, receive government and medical services and so forth, all within walking distance or a maximum of a few miles from home. Each center satisfies a high percentage of the trip needs of the residents and businesses within its service area. Each center includes commercial, institutional and public non-profit facilities. A three level hierarchy is proposed— Neighborhood TeleCenter, TeleVillage Center, and Central TeleDistrict. Centers will be located at rail stations where rail systems exist.

2) Distributed organizations which will emerge as traditional, centralized organizations restructure themselves to become more competitive in the global economy. Distributed organizations rely on telecommuting, teleconferencing, teleservices and teleprocessing to conduct business. Each organization, whether public or private, will view its telecommunications network as a strategic asset as important as its physical facilities.

3) Short haul transportation technologies and systems that serve home-to-nearby-center and center-to-center trips. Neighborhood TeleCenters and TeleVillage Centers become transportation hubs. Human-powered vehicles and low performance electric vehicles are used extensively for neighborhood transportation, while smart shuttles, larger electric vehicles and rail systems serve the TeleVillages and Central TeleDistricts.

4) Universally accessible telecommunications networks that provide sufficient, affordable bandwidth for the planned applications. Commercial, public/institutional and public/non- profit networks are cooperatively developed. A level playing field for commercial interests is maintained as all commercial carriers pay into local government's general funds for rights-of-way and spectrum use. Each local government maintains a "telecommunications trust fund" which is dedicated to the development and support of public/institutional and public/non-profit networks and nodes (e.g., TeleVillage Centers).

5) Institutional infrastructure to provide the sustained leadership and support for the regional development effort that leads to TeleCity. At least two institutions are needed—one for

management of the public/institutional and public/non-profit networks and one to work with organizations throughout the region to develop the network applications that define the transition from centralized to distributed organizations.

The Blue Line TeleVillage in Compton, California, is the first Urban TeleVillage and the first manifestation of the TeleCity Strategy.

THE BLUE LINE TELEVILLAGE IN COMPTON, CALIFORNIA

Many aspects of this demonstration project could be described, including its policy history, design, development steps, local and regional politics, institutional relationships, staffing, marketing, operating policies, economic development potential and so forth. This brief discussion focuses on its technological infrastructure and functional characteristics at the end of its 3 month beta test.

The Blue Line TeleVillage (BLTV) began a one year demonstration period on March 1, 1996. During its first three months, the facility was open for use about 20 hours per week. The intent of this initial period was to develop administrative systems, test technical systems and develop applications responsive to community needs. On June 3, operating hours increased to 50 per week and full scale operations began.

The discussion begins with a summary of background information, continues with a description of the technological infrastructure and ends with the planned applications.

Description

The Blue Line TeleVillage Center is a state-of-the-art community center located adjacent to the Metro Blue Line (a 26 mile light rail system that connects the central business districts of Los Angeles and Long Beach) at the Transit Center in the City of Compton. The Los Angeles County Metropolitan Transportation Authority (MTA) funded both the planning for the TeleVillage and a 12 month operational period.

The City of Compton is a low income community whose residents tend to depend on public transportation (rail and bus) for mobility in a region dominated by the private automobile. The TeleVillage is a new idea for improving mobility and for developing economic opportunities. Within five years, the TeleVillage is intended to *virtually* function like a traditional village center. That is, it will provide physical access to electronic markets, services and transactions. Residents will go there to:

- work
- shop
- take a class
- meet friends after school
- become computer literate
- get medical advice

- conduct government transactions
- get all kinds of information
- use computers
- produce a video program
- conduct a video conference
- hold a meeting

All of these activities will be possible because the Blue Line TeleVillage will be connected to participating schools, hospitals, medical clinics, government offices, employers and retailers by a high capacity telecommunications network.

If the idea proves feasible, a TeleVillage might be built at other Metro Rail Stations along the Blue, Green or Red Lines, at civic centers, or in neighborhoods throughout Southern California.

Lead Organizations

Lead roles in the demonstration are being played by the Los Angeles County Metropolitan Transportation Authority and Drew Economic Development Corporation.

Los Angeles County Metropolitan Transportation Authority

The MTA is providing the funds for the planning, design and implementation of this demonstration project. It was originally going to provide some level of network services, but that will not occur during the demonstration period.

Based on its regional mobility mission, the MTA is most interested in what can be learned from the BLTV demonstration about the utility of telecommunications services and the performance of the TeleVillage as an activity center that reduces trip length and increases transit ridership.

Drew Economic Development Corporation

Drew EDC, with subcontractors Community Resources and Siembab Planning Associates, won a competitively bid contract with MTA to plan, design and implement the Blue Line TeleVillage.

The Drew Team's responsibilities to open the project include the following:

- support the Advisory Board
- recruit employers to participate in the telework center
- provide technical assistance to all program sponsors, such as the telework center operator
- recruit resource partners and solicit in-kind and cash donations
- recruit service partners and help them develop their programs

Advisory Board

An Advisory Board represents the needs and interests of the community and has helped determine the specific services and policies of the TeleVillage. The Advisors has 35 members, primarily representing the greater Compton community.

Service Area

Based on the 1990 census, 28,000 people live within 1/4 mile of the TeleVillage, 33,000 live within ½ mile and 180,000 people live within 2 miles. Over 6,000 people a day get on or off either the rail system or the 6 bus lines that serve the area at the Compton Transit Center. Of these, 43% are rail and 57% are bus passengers.

Description of Initial Elements

The Blue Line TeleVillage will develop six elements during its demonstration year. This design is roughly equivalent to a neighborhood level center in the future. The scale of this demonstration project is small so that it is affordable and so that it can take roots and grow in the community that it serves.

Video Conference Center

This room will seat up to 16 people in either a classroom or a meeting configuration. The equipment is a CLI Radiance system with dual 32" monitors. Conferences will normally utilize three ISDN lines, but 6 are available when higher resolution is required.

Initial applications will include:

1) Distance education classes provided by California State University at Dominguez Hills and, eventually, other educational institutions throughout the region, state, nation and world. Classes will range from accounting practices for small business to web surfing, and from English-as-a-second-language to parenting skills.

2) Library services such as story telling for children and lectures for adults from city libraries located elsewhere in the region. Drew Head Start for pre-school children and Drew Day Care programs are located adjacent to the Video Conference Center and can provide an on-site supply of children for these programs.

3) Job-related services such as presentations on finding jobs in the state or federal governments.

4) Political meetings between elected officials from the southeast, south central and south bay sub-regions and their counterparts in central Los Angeles, or officials in Sacramento to Washington DC.

5) Contract training for employers located in the greater Compton area. Classes can range from basic skills to computer aided design.

Kiosks

The main hall of the building will hold a variety of kiosks. These include the Caltrans Smart Traveler kiosk which provides access to basic information about the region's public transit and highway system; an automatic teller machine from Wells Fargo Bank; the kiosk of the Housing Authority of the City of Los Angeles which allows access by the general public to job and consulting opportunities with the Authority and to information about the mission of the Authority; the AIDS Information kiosk provided by the County Museum of Science and Industry which provides access to a self-guided tour of the facts about AIDS. At least two additional interactive transactional kiosks are being sought.

Computer Center

The Center is equipped with 12 IBM Pentium-90 computers, a local area network with a Compaq Prolinia server running under Windows NT, and a Hewlett-Packard laser printer. The LAN is connected to the Internet via 4 ISDN lines. The Internet provider is Break Away Technologies, located in the Crenshaw district of south central Los Angeles. The initial software on the server includes Windows 95 and the Microsoft Office Suite.

Applications will include:

1) Public access computing—times when members of the public can gain access to a computer to pursue personal or business goals.

2) Courses for adults and children ranging from basic computer literacy to training in the specific software packages on the server. These classes will serve community organizations including the Watts-Willowbrook Boys and Girls Club, rehabilitation programs, non-profit corporations, and churches.

3) Internet access, especially employment and job training opportunities for adults, and exploration experiences for children. The Blue Line TeleVillage will register its own domain and TeleVillage members will receive their own an e-mail address and have the opportunity to create their own home page.

Telework Center

The Telework Center is being hosted by the Business Assistance Center of the City of Compton. It consists of two work stations each, equipped with computer, laser printer, telephone, and modem. There is, in addition, an Intel ProShare computer for desk top video conferencing which is supported by 1 ISDN line.

Applications include:

1) Professional work space for telecommuters—residents of the greater Compton area who are employed in businesses located elsewhere. The County of Los Angeles has one of the most advanced telecommuting programs in the nation and several County employees who normally report downtown or to other facilities will telecommute 2 to 4 days per month from the Blue Line TeleVillage Telework Center.

2) Professional work space for teleworkers—residents of the greater Compton area who are self-employed and/or a home-based business who need occasional access to a professional work station. The objective is to encourage start-up businesses and the growth of very small businesses.

3) Training sessions to interested local entrepreneurs and businesses on the use of desk-top video conferencing, including the screen sharing capabilities that facilitate collaborative work.

4) A mentoring program between students and faculty with entrepreneurial expertise at a graduate business school in the region and entrepreneurs from the greater Compton area—with interaction conducted primarily over the telephone and the desk-top video conferencing unit.

Public Lectures and Presentations

A range of live, in-person educational programs will be presented in the Community Room under the auspices of the Blue Line TeleVillage. For example, Wells Fargo Bank has agreed to provide a program on consumer and small business banking issues.

Television Production Capability

The Blue Line TeleVillage will be equipped with portable video recording and editing equipment and capable of originating live signals for downstream distribution over the local cable television system. This will allow the TeleVillage to record and distribute the live, in person educational programs as well as to develop special presentations for video such as a home-shopping program featuring businesses from the greater Compton area.

Circuit Rider Work Station

One work station in the administrative area of the Blue Line TeleVillage will be used by "circuit riders"—employees of a variety of government agencies who appear at the Blue Line TeleVillage on a regular schedule to provide information or directly deliver services. There are no current circuit rider commitments, but a twice-a-month visit by a benefits counselor from the Social Security Administration is an example of what will be developed.

Additional information on the TeleCity Development Strategy and the Blue Line TeleVillage are available directly from Mr. Siembab.